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ABSTRACT

In 1993, a partnership was formed between Cincinnati Bell Telephone, Clermont County Educational Service Center, University of Cincinnati-Clermont College, county businesses and 12 schools. Through this partnership, a distance learning project was envisioned that would enhance learning opportunities with technology. This paper describes how the Clermont County Distance Learning Project was developed. Discussion includes funding; roles and persons vital for a successful distance learning program, including principals, guidance counselors, coordinators/technical people, and parents; collaboration across the districts; common guidelines across the districts; community services; plans to develop professional development and mentoring programs; and the importance of flexibility and commitment. Also discussed are frequently asked questions such as the lack of discipline problems at remote sites; what the system looks like; teachers' responsibilities; costs of the distance learning lab; and teachers' attitudes toward the network. (AEF)

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Interactive Distance Learning: An Impetus for Collaboration

submitted to
Resources in Education

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Interactive Distance Learning: An Impetus for Collaboration

Walk down the halls of any of the ten high schools, two joint vocational schools, or the community college in Clermont County in southwestern Ohio and you will see the typical classes: a teacher working with small groups on a social studies project, an English teacher and her class discussing Catcher in the Rye, and a Japanese teacher asking her class to greet their classmates in Japanese twenty miles away. Twenty miles away! Hearing and seeing each other as if they were in the same room... Sounds like something from the future. Well, the future is now in Clermont County.

A typical day in the Clermont County Distance Learning Project finds participants engaged in all kinds of dynamic learning. A two-way audio and video, fully interactive, fiber optic system links our schools for unlimited possibilities. Parents, students, and teachers learning "together" in a sign language class; at the same time students from several schools are taking Sociology from a professor at Clermont College. In Transition to College Math, students in three different schools are busily solving problems together. Principals from around the county "meet" to discuss issues regarding the scheduling of classes for the 1996-97 school year, and in the evenings, teachers are enrolled in graduate classes which are offered via the network.

Background

Clermont County is located directly east of Cincinnati, Ohio, consisting of both suburban and rural areas. Of the nine school districts in the county, three are some of the poorest in the state and another is one of the wealthiest. What is available in one school is vastly unequal from what may be in another school. District populations range from about a thousand K-12 students to more than 8,000. In the past, equity of learning opportunities has differed greatly, depending on district sizes and monies available.

In early 1993 opportunities unfolded with Cincinnati Bell Telephone and the Ohio Department of Education whereby we formed a partnership between Cincinnati Bell Telephone, Clermont County Educational Service Center, University of Cincinnati - Clermont College, county businesses, and the 12 schools. Through this partnership, a distance learning project was envisioned. We wanted to enhance learning opportunities for all, and one of our first efforts was to organize a Technology Task Force. We had the idea that technology could help solve our problems. I am pleased to say that our vision has become a reality. Here is how we did it.

Funding

This undertaking required more money than most of our school districts had. How was it funded? Our business partner, Cincinnati Bell Telephone offered to invest $1.4 million into the project which included laying ninety miles of fiber optic cabling. They

also agreed to operate the network during an 18 month pilot period without any expense to the schools.

But even after Bell money was obtained, we found we still did not have enough money to fund the project. Each distance learning site would cost about $30,000 - to be funded by the schools. Money for the project was found in several ways: Ohio's Technology Equity Grants were available for the low wealth schools; several schools funded their own network labs; and private and corporate sponsors donated $155,000. Corporate sponsorships did not come easily, but thanks to Clermont County Educational Service Center's relationships with county businesses, our begging and arm-twisting paid off.

Ensuring Success

Anyone who has worked at implementing technology into the educational system can attest that getting the hardware and software is the easy part. The hard part is getting people to use it in an educationally sound manner. Over the past four years, we have identified factors that can make or break a major project such as a distance learning network. The following tips may help you through a similar endeavor.

At the beginning, make sure all groups who will be involved in implementing the project have a voice or at the very least are informed about the project. In our situation, the only people who were included were the superintendents and the county educational service center. This was unfortunate. It wasn't until all the funding had been obtained were the high school principals, guidance counselors, and teachers informed they were going to be responsible for carrying out the plan.

Involving everyone in the beginning creates ownership in the project and in our situation many people felt it was just " one more thing that I have to do". Working with nine school districts made it even more complex because if one district or group decided that they were not going to do their part, the distance learning network chain was broken. If the principal did not support the effort, the teachers were not inclined to instruct a course. Or if a guidance counselor did not schedule any students in the distance learning classes, the network advantages were nonexistent.

In retrospect, it is easy to see that all of these people should have played some part in the planning. This situation created pressure and tension on all parties particularly because so much money had been invested.

One of the biggest obstacles we have faced is inflexibility and the resistance to doing things differently - *even when the change is advantageous.* Because each district is unique, each finds that they must work with every other district in ways that had not occurred previously. Schools had to consider other districts' daily schedule; teachers had to be flexible in their class starting and ending times; principals were asked to limit class enrollment for distance learning classes so that students from other school districts could participate; and guidance counselors were asked to hand schedule students into classes.

Understandably, people were reluctant to do these things and what made them more hesitant was the fact that they had not been involved in the beginning. As educators became

mired down in administrative concerns, the mission of expanding the learning opportunities for their students in the district was temporarily forgotten.

Changes, particularly changes involving technology, require us to break with our old ways of thinking and to consider possibilities for new ways of working. Sometimes this is very challenging. Joel Barker (1990) calls this "paradigm paralysis". That is, a person gets stuck in a certain way of thinking and it prevents them from seeing new possibilities. So it was with our distance learning network; we had to persuade people to see its value, how it could enhance the curriculum, and provide other opportunities for the district.

What can you do to move people out of "paradigm paralysis"? Plenty! These things can be also applied to many of the other technology issues educators face in schools. First of all, identify teachers and principals, and superintendents who are supportive. Havelock (1995) refers to these individuals as the "opinion leaders". These are the people who are directly involved and accepting of the project. They talk and convince others to accept the change also. As role models, they stress the importance of the change, and most importantly support people who are involved in change.

I would highly recommend designating a coordinator for a distance learning project. Fullan (1991) suggests that a coordinator can help pull people together. This person is the main contact for issues related to distance learning. Although not a full time job, the coordinator's duties are crucial for the success of the project. With responsibility for organizing and leading meetings, the coordinator is also cheerleader, technical troubleshooter, and professional development trainer. S/he works with guidance counselors, teachers, superintendents, principals, business partners, and community. As a distance learning coordinator myself, I have also been the gopher for delivering books and materials from school to school. It also helps to have a technical person who handles weekly network scheduling and fixes the equipment.

Involve all key people! Different individuals have different responsibilities for distance learning. The following are brief descriptions of the groups who we think are vital for a successful distance learning program.

- A core group of people representing each district meet monthly to discuss the workings of the network. Usually these are the principals or technology coordinators. In their meetings, we give updates, work out problems, and discuss network expansion.

- For distance learning class scheduling, guidance counselors meet in early December to begin the scheduling process. Periodically, we meet to determine which courses will be offered over the network, what class times will be, and how many students can be enrolled. By late April or early May, the distance learning network schedule and number of students for each class has been determined. *Early scheduling is vital.* If you try to schedule distance learning classes in the fall, you will find students' classes have already been determined. Work with the guidance counselors. Not only do these people have to consider their own building schedules but also the distance learning schedule. FLEXIBILITY is a key word.

- Twice a year, distance learning teachers come together to discuss problems, share teaching strategies, and support one another. In addition, the coordinator and/or technical person for the network is available throughout the school day to help troubleshoot. New distance learning teachers also participate in a two day summer workshop where they learn how to operate the equipment, do basic troubleshooting, and most importantly learn effective teaching and interaction strategies. We have found, incidentally, that most network problems are human errors rather than equipment breakdowns. For example, people have inadvertently hit the audio power button resulting in no sound; or the lens cap is on the document camera so the image is not projected.

- One of the most important, but often forgotten groups are the parents. At the beginning of each school year, we demonstrate our network for parents at the annual open house. In the spring, we do demonstrations for students who will be enrolled in the following year's distance learning classes. We invite their parents, and this helps familiarize everyone with the network. Also, it is great press for the school district.

- Demonstrate what a successful distance learning network can do! We took several principals to another county with a successful program. We found that those schools had the same problems as we were going through at the time. This perspective helped us solve some of our own problems. In talking with peers, we expanded our vision of what Clermont County system *could* become. After this trip the principals became "opinion leaders" and shared with others in the county what great things the distance learning project could do. In their own buildings, they recruited students, teachers, and guidance counselors for involvement in distance learning.

- Recognize the work of schools and teachers. I can hardly emphasize this enough! When distance learning teachers volunteer to teach on the network, take on additional students from other schools, or work with a new technology; the least we can do is acknowledge and thank them. In Clermont County, we send thank you notes or "keep up the good work" notes periodically throughout the year. And at the end of each school year, our business partner, Cincinnati Bell, sponsors a dinner for all the distance learning teachers and their spouses.

- Share recent developments and good news about your network with superintendents, principals, and teachers. Newspaper articles, segments on local television news, and a bimonthly distance learning newsletter are ways to let the community know what wonderful things are being done in the schools. When community members and school officials acknowledge quality programs, your hard work pays off.

Collaboration Across The Districts

One of our goals was to establish some unique programs for the distance learning network. In brainstorming sessions with all nine of our district representatives, we decided

that we wanted to offer Japanese. Because none of the districts had enough students to support a full-time Japanese teacher, the county educational service center acted as the fiscal agent and each district contributed a share of the money to hire the teacher. Her contract was with the county office rather than with any one school district. Salary contribution by each district was based on the number of Japanese classes taught and the number of students involved at each site.

The county also hired a German teacher for the distance learning network. This type of collaborative hiring proved to be of great value for the schools. The addition of German and Japanese over the network tripled language offering for one of the poorer, rural districts. Previously it had offered only one language - Spanish.

Establishing Guidelines

Working with nine school districts, we found it necessary to institute common guidelines that would also clarify expectations for distance learning. Some of our policies are:

- no more than twenty five students across all connecting sites for each class
- teachers volunteer to teach over the network
- a contact person is required at each building
- distance learning classes need a designated guidance counselor.

One difficult problem for us is that our various districts are not all on the same bell schedule. To solve this problem, we have "clustered" the schools with similar class times. These times do not match exactly, but schools and teachers have been extremely FLEXIBLE in letting classes start a couple of minutes late or end a few minutes early. Fortunately the school calendar across the county schools are the same with the exception of one district.

Bringing Communities Together

Our distance learning network serves more than schools. Through it, community groups have come together. In the last election, for example, sheriff candidates staged a debate that linked three county sites. Voters attended their nearest school, listened to the candidates, and asked them questions. The network reduced travel time for many, brought communities into our schools, and informed people about the election.

Other types of community offerings have consisted of a workshop series presented by the Soil and Water Conservation Corp; a sign language class offered to parents, teachers, and students; and college courses. Through a partnership with a local university, teachers have the benefit of taking graduate classes in their own schools. Another university brings graduate students to observe the delivery of curriculum through technology.

What Has Happened? Some Stories

As we began our distance learning project, we could not anticipate everything that might happen. Some of these events have been real bonuses. In our first year, we offered an

intervention class for the State of Ohio's ninth grade social studies proficiency exam. As with many intervention classes, some at-risk students are enrolled. One of these students, Sarah, had often skipped school, had failing grades, and in general did not like school. Because the teacher for Sarah's networked class was not physically present, he asked Sarah if she would be responsible for making sure the equipment was functioning properly: volume was audible, fax was turned on, camera angles were appropriate and so on. With some reluctance, Sarah agreed.

Time passed, and Sarah's principal noticed that her attendance was much better. He stopped her in the hallway one day to remark about the improvement. Sarah responded, "Yeah. Well, I've got to take care of the lab for my class. If I don't do it, there won't be anybody else that can." What an unexpected benefit of distance learning. And Sarah, by the way, along with classmates, passed the test.

Through their experience in networked classes, students have discovered social aspects of distance learning. Students from different schools have become friends and have enjoyed learning about the other areas in the county. They have attended other schools dances' and other social happenings. Language teachers have used school events and athletic competitions as topics for conversations Japanese, Spanish, or German. Our German IV class formed a club across three high schools and went on German related field trips. Debate teams and academic team scrimmages, D.A.R.E. meetings, F.H.A. meetings, and extra curricular groups all make use of our distance learning network.

Where Are We Going?

When this project started, we focussed on expanding the curriculum opportunities for the county's high schools. What we continue to discover is that there are enormous advantages for our network in other areas as well. Currently our plans are to develop professional development and mentoring programs. Novice teachers will have opportunities to observe veteran teachers and learn specific classroom techniques such as cooperative learning, the use of manipulatives, classroom management skills, and interdisciplinary groups. If our grant is funded, a graduate program for nurses will begin this winter. Many nurses in our county and the surrounding rural counties woul find it difficult to travel to Cincinnati to pursue a masters degree. Through the use of our network, nurses would have access to a high quality and feasible masters program.

This year our business partner, Cincinnati Bell plans to connect the Cincinnati Zoo and Botanical Garden with our distance learning network. Clermont County students will be able to talk to the zookeepers, naturalists, and observe animals from their own classrooms. In connection with this, the zoo has designed lesson plans and experiments. We are in hopes that future nodes on the network will include area museums and arts centers.

For maintaining a successful distance learning project, key words are flexibility and commitment. As a means for delivering information and learning opportunities for communities, students, parents, teachers, and businesses, distance learning multiplies opportunities. We think the Clermont County Distance Learning Network has proven it!

Frequently Asked Questions

Are there discipline problems at the remote sites?
No. Some of the districts have chosen to put a monitor in the remote classrooms. These people have been teacher aides, teachers on their duty period, and bus drivers. Other schools have not used any monitors. The class size across all sites is limited to twenty five and typically the number of students in each classroom is no more than five. Telephones and important numbers are available in the classrooms if an emergency should arise.

What does the system look like?
The teacher and students can see and hear one another as if they were in the same room. Fiber optic lines allow video and audio to be "real time"; there is no delay whatsoever. Multiple classes can be sent simultaneously without any degradation to the video or audio. Teachers can switch on different cameras at their own site or control cameras at the remote sites. In a typical situation, the teachers have the camera on themselves in their own classroom and the students at the remote sites have a camera pointed at them so that all students see the teacher and the teacher sees all the students. If a student responds, the teacher can direct the camera at the student.

There are two forty inch monitors; one at the back of the room in the teacher's line of vision and one at the front of the room for the students to view the students or the teacher at the other site. There is also a small twelve inch monitor on the teacher's desk so the teacher can see what picture is being sent to the remote sites.

A VCR, document camera, and the control panel are also located on the teacher desk. Some schools have also hooked up a computer and a video laser disk player to the system, so that software and laser discs can be transmitted to the monitors. Student microphones are located on the desks for every two students. A fax and copier are located in every lab so that assignments and quizzes can be sent to different sites.

Besides teaching what are some of the teacher's other duties?
The teacher's responsibilities are the same. Teachers are faxed absentee lists from the all sites and reports any absences to the schools. Grades or academic problems are reported to the guidance counselors. If needed, calls are made to parents. If there is a behavior problem, the teacher deals with it as usual. Every teacher has their classroom rules and also has a faculty and student handbook for each high school.

How are the costs of the distance learning lab justified?

The purpose of the distance learning lab is to provide learning opportunities for the schools and communities. To justify the costs, if one takes the yearly operating budget for the high school and divide the number of courses the school has, the average cost of a course is

$20,000. It costs less than that to have **one** course on the distance learning network. As more courses are added to the network, the price goes down even farther. Furthermore, when schools formed consortiums to pay for a teacher's salary, such as our Japanese teacher, they were able to get even more courses.

Do teachers feel threatened by the network?
At the beginning of the project, the teachers thought they were going to be replaced by the network. In reality, the opposite has happened! Teachers who were going to have to go to part-time, have been hired as full-time. We have hired two additional full-time teachers.

Because teachers who teach over the network are volunteers, this eliminates the fear factor of the technology. They have been assigned a class at their home school and they offer to extend the class to the other sites as well. If a teacher is being evaluated that year, they are not observed during their distance learning class.

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